

REMARKS

Claims 1 and 15 have been amended. Claims 1-22 are presently pending.

In view of such amendments and the following remarks, reconsideration and allowance of the claims, as presently presented, are respectfully requested.

EXAMINER'S ACTION**The 35 U.S.C. § 103 Rejections**

Claims 1-7 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,594,863 ("Stiles") in view of U.S. Patent No. 6,049,874 ("McClain *et al.*") and U.S. Patent No. 5,740,370 ("Battersby *et al.*"). In addition, claims 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stiles in view of McClain *et al.* and Battersby *et al.*, and further in view of U.S. Patent No. 6,453,404 ("Bereznyi *et al.*"). Further, claims 10 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stiles in view of McClain *et al.*, Battersby *et al.* and U.S. Patent No. 5,706,435 ("Barbara *et al.*"). Claims 1 and 15 as amended, and claims 2-10 and 11 which depend directly or indirectly upon claims 1 or 15, clearly are patentable over the cited combinations of references.

Claim 1, as amended, is directed to a method for managing shared access to data files stored in a file server where a first storage cache is supplied with a copy of a data file retrieved from the file server by a cache server, and where the first storage cache is associated with a first workstation and stores the copy of the data file as a cached data file. Claim 1, in relevant part, requires that the first storage cache "incorporat[es] data file modifications entered by the first workstation into the cached data file as the modifications are entered, such that the cached data file is a current version". Claim 1 further requires that the cache server generates a replacement

version of the data file stored at the file server based on file update data which the first storage cache provides and "is a function of the modifications incorporated into the cached data file which make the cached data file the current version." Thus, the inventive method advantageously provides that storage caches and a cache server interface, respectively, with associated workstations and the file server to provide that the "workstations have shared access to real time data files stored at [the] file server." (See specification paragraph [0018], see also specification paragraphs [0019] and [0035]).

Applicant respectfully traverses the Examiner's statement that the recitation in claim 1 that the storage cache incorporates data file modifications entered by the first workstation into the cached data file "as the modifications are entered, such that the cached data file is a current version" is not supported in the application. Paragraphs [0042] and [0045] of the specification support this limitation. Contrary to the Examiner's assertion, the meaning of "current" does not necessarily require that the cached data file is changed keystroke-by-keystroke based on data file modifications entered by a user at a workstation within the remote system. Without admitting the propriety of the Examiner's rejection, claim 1 has been amended to clarify that, in the step of "automatically transmitting the file update data," the file update data is a function of the modifications incorporated into the cached data file "which make the cached data file the current version."

A current version of a cached data file, as required by the claimed invention, incorporates "all modifications to the cached data file previously made by any workstation" which is associated with the storage cache in which the cached data file resides. The automatic transmission of file update data from the storage cache to the

cache server, where the file update data is a function of the modifications incorporated into the cached data file that make the cached data file a current version, permits the cache server to generate a replacement version of the data file stored at the file server based on the current version of the cached data file. Thus, all workstations can have shared access to a real time data file stored at the file server, because the cache server responds to a request for access to the data file using the replacement version of the data file, which is used to replace the data file stored at the file server.

The Examiner again admitted (page 10 of Action) that Stiles does not teach that the file update data is a function of the modifications incorporated into the cached data file. In addition, Stiles does not teach that the file update data is a function of the modifications that would make the cached data file a current version. Also, contrary to the Examiner's allegation, in the claimed invention file "updates" are not propagated to the file server as in Stiles, but rather to the cache server, which generates a replacement version of the data file therefrom.

McClain *et al.* does not cure the deficiencies of Stiles because McClain *et al.* only describes sending changed portions of a file to a back-up site. McClain *et al.* does not teach or suggest a storage cache sending to the cache server file update data representative of modifications, where the modifications can be made by any one of a plurality authorized workstations and where all of the modifications are incorporated into the cached data file to maintain the cached data file a current version.

Battersby *et al.* also does not cure the deficiencies of McClain *et al.* and Stiles. Although Battersby *et al.* describes a shared cached server that is separate from a conventional file server, nowhere does Battersby *et al.* teach or suggest that the cache

server generates replacement versions of data files as required by the claimed invention.

Claim 15, which includes amendments corresponding to those made in claim 1, also is patentable over the cited references for the same reasons as set forth above with respect to claim 1.

Accordingly, claims 1 and 15 are patentable over the cited combination of references, and claims 2-10 and 16, which depend directly or indirectly from claims 1 and 15, are patentable over the cited combinations for the same reasons as set forth above with respect to claim 1 and because of the further restrictions they add.

In addition, claims 11-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Barbara *et al.* in view of McClain *et al.*, U.S. Patent No. 5,924,096 ("Draper *et al.*") and Battersby *et al.* Claim 11 is directed to a method for managing shared access to data files stored in a file server requiring, in relevant part, the step of automatically transmitting file update data from a cache server to a storage cache in response to a workstation request for access to the data file received at the storage cache, and where the data files are stored at the file server. The Examiner acknowledged that Barbara *et al.* and McClain *et al.* fail to teach the step of automatically transmitting file update data from a cache server to a storage cache "in response to a workstation request for access to the data file received at the storage cache." Draper *et al.* and Battersby *et al.* fail to cure the deficiencies of Barbara *et al.* and McClain *et al.* Although Draper *et al.* concerns updating a cache in response to a request to access the cache, nowhere does Draper *et al.* teach or suggest that a cache server and a first storage cache interface with a file server and a plurality of workstations, respectively, where the cache server automatically transmits file update

data to the first storage cache in response to a request for access to a data file stored at the file server "associated with the cache server." In addition, although Battersby *et al.* describes a shared cache server that is separate from a file server, Battersby *et al.* does not teach or suggest, or provide the motivation to one skilled in the art, to modify the other cited references to provide a cache server that automatically transmits file update data to a first storage cache and also to incorporate the file update data at the first storage cache as required by claim 11.

Accordingly, claim 11 is patentable over the combination of Barbara *et al.* and McClain *et al.*, and furthermore claims 12-14, which depend directly from claim 11, are also patentable over the cited combination for the same reasons as set forth above with respect to claim 11 and because of the further restrictions they add.

Further, claims 17-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stiles in view of U.S. Patent No. 5,689,706 ("Rao *et al.*") and Battersby *et al.* In addition claims 21-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stiles in view of Rao *et al.*, Battersby *et al.* and further in view of McClain *et al.* Referring to claim 17, the Examiner admitted that Stiles does not teach the claimed leasing module. Although Rao *et al.* describes regulation of reading and writing files, Rao *et al.* fails to teach or suggest a data file sharing system including a plurality of storage caches and a cache server, and where the cache server includes a leasing module that grants or denies a request for a lease of a data file from a storage cache in accordance with the claimed criteria. Claim 17 requires that "a reader right can be granted if a write lease already exists" (see specification at paragraph [0061]), whereas the leasing provisions of Rao *et al.* provide that if one workstation has a write token (*i.e.*, a write lease) no other workstations can have a token (*i.e.*, read or reader

rights). Further, *Battersby et al.* does not overcome the deficiencies of *Stiles and Rao et al.* concerning the teaching of leasing criteria required by claim 17.

Accordingly, claim 17 is patentable over the cited combination of references. In addition, claim 18, which includes limitations corresponding to those recited in claim 17, is patentable over the cited combination for the same reasons as set forth above with respect to claim 17. Further, claims 19-22, which depend directly or indirectly from claim 18, are patentable over the cited combination for the same reasons as set forth above with respect to claim 18 and because of the further restrictions they add.

Withdrawal of the Section 103 rejections is, therefore, respectfully requested.

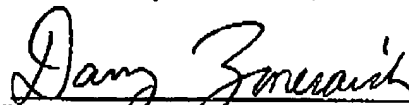
CONCLUSION

For the foregoing reasons, it is believed that all of the claims, as presently presented, are patentable.

The Examiner is invited to telephone the undersigned if it is believed that further amendment and/or discussion would help to advance the prosecution of the present application.

Reconsideration and allowance of claims 1-22 are, therefore, respectfully requested.

Respectfully submitted,



Davy E. Zonerach
Registration Number 37,267

NORRIS, McLAUGHLIN & MARCUS
P.O. Box 1018
Somerville, New Jersey 08876-1018
Phone: (908) 722-0700; Fax: (908) 722-0755
E-Mail: ipdept@nmmlaw.com
Attorney Docket No: 102916-001US